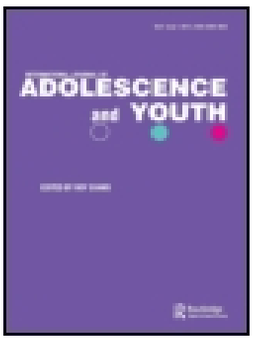

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Why stigmatized adolescents bully more: the role of self-esteem and academic-status insecurity

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ABSTRACT

Previous research finds that low achievers and students from lower socioeconomic status backgrounds are more likely to bully peers, but fails to satisfactorily explain why. This paper tests the hypothesis that feelings of insecurity mediate the relationship between family background and low achievement, as predictors, and self-perception of being a bully, as the outcome. It operationalizes feelings of insecurity as self-esteem and academic-status insecurity. Using a large and diverse dataset of survey responses from secondary school males in the U.S. (N = 7,291, 45% White, 30% Black, 25% Latino from 6^{th}-12^{th} grade), the paper applies multi-level mediation analyses to test the hypothesis separately for Blacks, Whites, and Latinos. For all three groups, the insecurity measures account for virtually all of the relationship between a grade point average and self-perception of being a bully, and about a third of the relationship between family background and the same bullying measure. Implications are discussed.

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Bullying; insecurity; stigma; socioeconomic status; achievement; ethnicity

Introduction

Bullying behavior in schools is an international phenomenon (Akiba, 2010; Lee, 2012; Pepler, Jiang, Craig, & Connolly, 2008; Shaw, 2012; Wolke, 2001), and tends to be highly prevalent. For example, one in five students in the United States reported being a victim of bullying during the school year 2013 (Musu-Gillette, Hansen, Chandler, & Snyder, 2015). The practice has harmful consequences for bullies, victims, and bystanders (Twemlow & Sacco, 2011), and may include anxiety and truancy (Sanchez et al., 2001), lower academic achievement (Barth et al. 2004; Mah, 2009; Ponzo, 2013; Strøm, 2013), and reduced college going (Crosnoe, 2011). Furthermore, strategies to reduce bullying behavior among adolescent students remain largely ineffective (Yeager, Fong, Lee, & Espelage, 2015).

The aim of this paper is to help explain why some adolescents are more likely to become bullies than others. It tests the extent to which socially-induced feelings of insecurity mediate the relationship between measures of family socio-economic status (SES) and academic achievement (GPA) and a dependent variable measuring bullying among adolescent boys.

Social identity and bullying behavior

Aspects of student identity such as SES and academic performance predict which students are more likely to be involved in bullying, either as victims or as perpetrators. In a meta-analysis on the

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relationship between SES and bullying, Tippett and Wolke (2014) find that having a lower SES predicts slightly more involvement with bullying, as a bully or a victim. As a potential explanation, they suggest that lower-SES students may be singled out more frequently in unflattering ways and bully as a way of fighting back. A study by Veland, Bru, and Idsøe (2015) is another source of evidence that lower-SES students are more likely to be singled out and socially excluded in school. Familial relations matter as well. Tippett and Wolke (2014) suggest that in addition to bullying at school, interpersonal norms such as verbal put-downs and lack of attention that embody or seem to condone bullying are more common in lower-SES homes and this may contribute to bullying behavior at school.

There may also be racial and ethnic differences in bullying behavior. For example, Graham and Juvonen (2002) studied an urban middle school with a few hundred students and found that Blacks and Latinos were more likely than Whites to be identified as bullies, but less likely as victims. Rodkin, Pearl, Van Acker, and Farmer (2000) is another study that found Black boys overrepresented in the aggressive category. Similar to Graham and Juvonen (2002) finding that they were less often victims, Rodkin et al. (2000) find that conditional on being aggressive, Black boys were more popular than boys from other groups. Of course, any measure of bullying behavior is subjective, so especially when it comes to perceived between-group differences in places where racial stigmas exist, biased perceptions of behavior may play some role in shaping comparisons.

Finally, bullying behavior differs by gender (Espelage, Mebane, & Swearer, 2004). Boys tend to bully in direct and obvious ways, while girls tend to engage in more relational strategies of bullying, including gossiping and social exclusion (Owens, Shute, & Slee, 2000). The possibility of systematic differences by race and gender, either objective or subjective, should not be surprising. Indeed, Crosnoe (2011) gives reasons to expect that peer groups will form along racial, ethnic, and gender lines and therefore, that bullying dynamics might differ by these identity characteristics in ways that can be empirically studied.

Social status and stigma

SES differences are often quite apparent to a student's peers and almost any interpersonal difference that is conspicuous to adolescent peers can get imbued with social meaning and affect social status (Underwood & Ehrenreich, 2014). For example, Thornberg (2010) reports that deviations from group norms in terms of behavior or physical appearance are the most common reasons that students get targeted for bullying, but family background and academic performance may be reasons as well. Peguero (2013) find that minority students who break racial or ethnic stereotypes of their own group, such as high-SES Black and Latino students, experience more bullying victimization. Similar to Thornberg, they theorize that the bullying in this case is a form of social penalization for group norm deviations.

Beyond SES, poor academic performance, especially by students from racial or ethnic groups that are already negatively stereotyped for intelligence, may be interpreted, even by members of the stereotyped group, as evidence that the person fits the 'less smart' stereotype (Johnson, Richeson, & Finkel, 2011; Jencks & Phillips, 1998).

There may also be within-race gender differences in who is expected to be smart or not. Ferguson (2016) suggests that because Black girls tend to outperform Black boys academically, Black boys are likely to be stereotyped as less smart and face lower academic expectations from teachers and peers. During his field work, Morris (2012) finds that low-SES rural White and low-SES urban Black boys purposefully reduce their academic effort and achievement in order to adhere to expected stereotypes about masculinity that are prevalent in their respective communities.

Feelings of insecurity and bullying behavior

The idea that feelings of insecurity might be a reason for bullying behavior is prominent in the work of Søndergaard (2012). Her findings are based on several years of interviews and observations

in school environments and suggest that fear of social exclusion is a primary reason that students bully; she concludes that social status evaluations are based on students' interests, behaviors, and possessions. Crosnoe (2011) adds that most students are socially embedded in peer groups, which he calls *people like us* groups (PLUs), and it is within these PLUs where social marginalization processes occur. Typical labels for PLUs include *brains, jocks, alternatives*, and *burnouts* (Mackey & La Greca, 2008). Most schools will have several PLUs of each type, and membership becomes part of a student's identity (Eccles & Gootman, 2002).

Søndergaard (2012) writes that peer groups engage in a process she calls *contempt production*. First, group members negotiate to decide what types of behaviors, interests, and artifacts are considered *cool* or *uncool*. Then, they classify peers into the categories, and bully those branded uncool. Group members who feel most at risk of being reclassified uncool feel the greatest inducement to distinguish themselves by bullying. Taylor's (2011) study on teasing about obesity provides an excellent example of contempt production. In this qualitative study, girls branded their peers as *normal* or *fat* and the line between these categories was constantly negotiated. Those on the wrong side of the line were singled out more often for teasing.

Other findings consistent with Søndergaard's work include a meta-analysis of 121 studies in which lower self-esteem is a small but statistically significant predictor of bullying behavior (Tsaousis, 2016), and research that suggests that students use bullying as a means to gain popularity in peer groups (Farisa & Felmlee, 2014). A likely explanation for why self-esteem is not a stronger predictor, is that conventional measures of self-esteem may mask two distinct forces that work in opposite directions. The aspect expected to be associated with less bullying, is the sense of self that comes from having wholesome relationships with parents, teachers, and friends, and competence in salient social and academic skill domains. Offsetting this are aspects associated with narcissism and defensive egotism, where defensive egotism is a delusional form of self-esteem closely related to narcissism (Nail, Simon, Bihm, & Beasley, 2016). People high in defensive egotism and narcissism tend to have high self-esteem by some conventional measures, but they are also more likely to bully peers (Fanti & Henrich, 2015; Reijntjes et al., 2016).

Purpose of study

Given the previous findings that students who are stereotyped as less intelligent, such as lower-SES and academically struggling students, face insecurity-inducing social stigma and are also more likely to engage in bullying, this study tests the following hypothesis (see Figure 1): Does the link from SES and GPA to bullying operate through feelings of insecurity? Insecurity is conceptualized partly as low self-esteem and partly as fear of being regarded as intellectually limited. We call the latter *academic-status insecurity*, and theorize that it can contribute to bullying behavior for reasons most closely associated with Søndergaard's (2012) theory of contempt production, in which adolescents bully peers in order to deflect negative attention and avoid being held in contempt. In most studies of bullying that include an insecurity measure, that measure is self-esteem. A key contribution of this paper is to introduce the concept of academic-status insecurity into the bullying literature.

Figure 1. Conceptual Model.

Given Crosnoe's (2011) suggestion that bullying occurs primarily within peer groups, which tend to form along the lines of race, ethnicity, and gender, this paper tests the hypothesized model separately for three intersectional subgroups along these identity lines, i.e. White, Black, and Latino boys. The focus on adolescents results from the fact that typical anti-bullying interventions tend to have less success for adolescents than for children (Yeager et al., 2015). This suggests that research on factors that might explain adolescent bullying behavior is in particularly urgent need.

Methods

Participants

This paper is a secondary analysis of de-identified, student-level data from 153 middle and high schools in the Southwestern United States that commissioned Tripod Education Partners, Inc. to provide student surveys for their school improvement work. The surveys cover a variety of topics, but focus primarily on the quality of teaching and student engagement in learning. Data used here are from an extended version that includes social-emotional and climate measures.

The entire initial data set available for this study, including males and females of all ethnicities, comprised of 17,082 participants from schools where at least 50 students responded. Data used for this paper, which covers only males, are limited to Whites (45%), Blacks (30%), and Latinos (25%) from grades six through twelve, resulting in 7,291 student observations. See *Table 1* for descriptive statistics.

Procedures

Students in the analysis are all who attended on the days that the school administered the survey. In some cases, students who were absent completed the survey later. School personnel administered the survey school-wide during a designated period of the day and all responses were completely confidential. Those who respond on paper seal completed surveys in peal-and-stick envelopes before handing them in, while others responded online using personalized codes to log in.

Student-level measures

Outcome variable: bullying

The bullying outcome variable in this paper is a single-item index from the Tripod survey (Guide to Tripod's 7Cs framework, 2016) and based on the statement 'Other students think I am a bully.' It is measured using a five-point Likert scale, but for this study, responses of 5 are set equal to 4 for all groups because of small cell-sizes for Latinos. Analyses were conducted to confirm the item's validity as an actual indicator of bullying behavior. See Appendix A for a summary of those analyses.

Table 1. Means and Standard Deviations for Background and GPA Variables, by Race/Ethnicity.

	White		Black		Latino	
	M	SD	M	SD	M	SD
Books	3.421,998	1.193,689	2.587,992	1.194,691	2.475,514	1.227,959
Computers	3.158,167	0.8,752,594	2.646,463	0.9,735,177	2.618,419	0.9,628,549
Dad at Home (Yes/No)	0.7,641,137	0.4,245,715	0.3,870,508	0.4,871,102	0.6,149,089	0.4,866,575
Parental Education	3.646,688	1.133,521	3.284,797	1.152,862	2.741,434	1.238,589
Foreign Language Speaking	1.225,442	0.7,368,457	1.444,381	1.090624	3.455,791	1.490,865
Previous GPA	3.438,559	0.8,003,292	3.063177	0.9,086,827	3.074043	0.9,303,924

Insecurity indices

The *academic-status insecurity* index derives from the learning goal concept of *performance avoidance* – i.e. avoiding an appearance of incompetence compared to others – in the work of Midgely et al. (2000), and Midgley and Urban (2001), which has established reliability and validity (Jagacinski & Duda, 2001). The index was created from the following four items: 'I worry about not looking smart'; 'I worry that people think I am too serious about my schoolwork'; 'I worry what other students think about me'; 'In this class, I worry that I might not do as well as other students'. The academic-status insecurity index has an internal consistency of 0.71.

The self-esteem index in the Tripod survey takes three items from the widely-used Rosenberg Self-Esteem Scale (Rosenberg, 1965) and has a Cronbach's alpha of 0.75. Its reliability and validity are well-established (Rosenberg, 1965; Shorkey & Whiteman, 1978; Silber & Tippett, 1965).

Academic achievement

The Tripod survey's achievement measure is the self-reported grade point average (GPA) across all subjects at the end of the previous term, measured on a four-point Likert scale.

SES predictors

All SES measurements are from the Tripod survey. *Family structure* is a dichotomous variable that equals 1 if the student has a father at home and 0 if not. *Books at home* is a five-point Likert-scale item with five answer choices ranging from '0–10' to 'More than 250'. *Computers at home* is a four-point Likert scale item with four answer choice ranging from 'None' to 'Three or more'. *Foreign Language* is a five-point Likert scale item and reads 'Do your parents speak a language other than English at home?' It offers answer choices ranging 'Never' to 'Always.' *Parental Education* is also a five-point Likert scale, and reads 'Think of the adult at your home who went to school for the most years. This person: … ' and offers answer choices ranging from 'Did not finish high school' to 'Finished a professional or graduate degree after college'.

School-level control variables

In addition to the individual-level predictors listed above, the models include school-level means to control for between-school differences in student body composition. They include school means of all SES variables introduced above, plus the percent students of color, the percent male student, and four dichotomous variables measuring the teaching climate.

The teaching-climate variables are authoritative, authoritarian, permissive, and neglectful based on Tripod indices for instructional press and support, which in turn are created from the Tripod 7Cs measures of teaching quality (Ferguson & Danielson, 2015). The 7Cs measures of teaching quality are reliable and valid (Cantrell & Kane, 2013; Chaplin, Gill, Thompkins, & Miller, 2014; Ferguson & Danielson, 2015; Kane & Cantrell, 2010; Kane & Staiger, 2012; Polikoff, 2016; Raudenbush & Jean, 2014).

With the exception of gender, and father at home, school composition variables enter the equations separately for Whites, Blacks, and Latinos. For example, the specification allows for the possibility that the average GPA of Whites at a school may predict the propensity of Black students to behave as bullies. All school-level variables are grand mean centered.

Analyses

The analyses use two-level hierarchical models because students are nested in schools. The study follows the method proposed by MacKinnon, Lockwood, Hoffman, West, and Sheets (2002) for estimating mediation and entails three steps. First, we predict bullying behavior using the mediators and all other independent variables. Statistical significance of mediators in this equation is a pre-requisite to statistically significant mediation. In the second step, we predict bullying using all predictors other than the mediators. In the third, and final step, we calculate mediation effects as differences in background variable coefficients from steps one and two. According to some researchers, a mediation effect of at least 20% is large

enough to be noteworthy (Hosmer & Lemeshow, 2013, p. 67). In order to calculate the statistical significance of the mediation effects, we use the *normal theory* approach described by Hayes (2013, p. 138).

The analyses are conducted separately for Blacks, Whites, and Latinos, and then tested for racial/ethnic differences in estimated parameters. The reason for running the analyses separately by race/ethnicity is that peer groups tend to form along racial, ethnic, and gender lines, and parameters therefore may differ between groups (Crosnoe, 2011). The decision to focus only on males is not a judgement that bullying is of any greater or lesser importance for boys. Future research will test the same hypotheses for girls.

For most variables, fewer than 3% of the observations were missing and case-wise deletion was applied. The exception was parental education, where the classroom average of parental education was substituted for the 21% of the observations that had missing values.

Results

Predicting bullying

Table 2 shows the results for predicting bullying with and without mediators, estimated separately by race/ethnicity, and *Table 3* shows the results from testing whether the differences in the coefficients from *Table 2* – the mediation effects – are significant. In order to test for significant racial/ethnic differences in the coefficients, *Table 4* was generated by re-running the same equations as for *Table 2*, but this time with two racial groups in each equation, interacting each predictor with a racial/ethnic indicator. Results for the background and GPA variables in *Table 4* are from the specifications shown in the first three columns of *Table 2*, which exclude the mediators as predictors.

Mediation effects

Table 3 presents the size and significance of the mediation effects. Consistent with the paper's core hypotheses, both insecurity measures – self-esteem and academic-status insecurity – mediate the relationship between students' backgrounds and bullying.

The strongest effect is for GPA. For Blacks, Latinos, and Whites, the insecurity measures mediate virtually all of the predicted differences in bullying between boys who earn A- and B-range GPAs compared to those who earn Ds or lower. Without the insecurity mediators in the equations on *Table 2*, the unmediated differences in bullying between A-range and D-range students are roughly .20 standard deviations for Blacks and Whites, and .09 for Latinos. When insecurity variables are included as mediators, these same differences drop by .15 to .20 of a standard deviation. Similarly for Latinos, the estimated effect of have an A-range instead of a D-range GPA changes from −.09 without the mediators in the equation to +.09 with the mediators added. *Table 3* indicates that this change of .18 standard deviation is highly statistically significant and roughly the same for Blacks and Whites.

While all three racial/ethnic groups experience similar mediation effects for GPA, the absolute values of mediation effects for the other predictors are generally larger for Blacks than for Whites or Latinos. The mediation effects of insecurity for Blacks distinguish the least well-off students from their more advantaged peers. Beyond GPA, the largest mediation effect for Blacks is for parental education: prior to controlling for insecurity, bullying is between 0.35 and 0.50 of a standard deviation higher for Black adolescents whose parents did not complete high school than for those whose parents did. Insecurity mediates 30 to 40 percent of this difference.

Similarly, when not controlling for insecurity, Blacks with 10 or fewer books at home are between .10 and .25 standard deviation more prone to self-identify as a bully compared to peers who have more books. Insecurity mediates about half of these differences. Additional, but smaller

Table 2. Predicting Bullying Without and With Mediators.

	Without Mediators			With Mediators		
Variables	White	Black	Latino	White	Black	Latino
Column:	(1)	(2)	(3)	(4)	(5)	(6)
Self-Esteem	–	–	–	−0.180**	−0.190**	−0.108**
				(0.0164)	(0.0226)	(0.0239)
Academic-Status Insecurity	–	–	–	0.156**	0.291**	0.313**
				(0.0161)	(0.0218)	(0.0246)
0–9 Books in the Home	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
10–24 Books in the Home	−0.0674	−0.149*	−0.0820	−0.0406	−0.0692	−0.0699
	(0.0682)	(0.0683)	(0.0679)	(0.0652)	(0.0637)	(0.0646)
25–99 Books in the Home	−0.119^{+}	−0.254**	−0.0730	−0.0831	−0.128*	−0.0527
	(0.0609)	(0.0669)	(0.0702)	(0.0584)	(0.0627)	(0.0669)
100–249 Books in the Home	−0.0675	−0.190*	−0.141	−0.0331	−0.103	−0.0997
	(0.0651)	(0.0880)	(0.0957)	(0.0624)	(0.0820)	(0.0911)
>250 Books in the Home	−0.0260	−0.183^{+}	0.136	−0.0169	−0.0846	0.0748
	(0.0669)	(0.0964)	(0.103)	(0.0640)	(0.0900)	(0.0978)
No Computer	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
1 Computer	−0.248**	−0.105	0.0702	−0.193*	−0.0686	0.0412
	(0.0902)	(0.0864)	(0.0860)	(0.0863)	(0.0804)	(0.0816)
2 Computers	−0.275**	−0.216*	0.132	−0.217*	−0.151^{+}	0.140
	(0.0898)	(0.0891)	(0.0925)	(0.0860)	(0.0830)	(0.0877)
3 or More Computers	−0.229*	−0.0623	0.240*	−0.169^{+}	−0.0167	0.246**
	(0.0902)	(0.0936)	(0.0974)	(0.0864)	(0.0872)	(0.0924)
Dad at Home (Yes/No)	−0.112**	−0.0742	−0.164**	−0.0843*	−0.0584	−0.150**
	(0.0400)	(0.0487)	(0.0533)	(0.0383)	(0.0453)	(0.0505)
Parent Less Than High Sch.	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
Parent High School	−0.0657	−0.499**	0.108	−0.0378	−0.346**	0.0652
	(0.107)	(0.138)	(0.0819)	(0.103)	(0.129)	(0.0777)
Parent Associates Degree	−0.0707	−0.494**	0.0809	−0.0216	−0.318*	0.0567
	(0.105)	(0.136)	(0.0885)	(0.100)	(0.127)	(0.0840)
Parent 4 Year College	−0.100	−0.384**	0.0165	−0.0392	−0.255*	−0.00977
	(0.105)	(0.139)	(0.0982)	(0.100)	(0.129)	(0.0931)
Parent Graduate Degree	−0.0796	−0.356*	0.120	−0.0240	−0.223^{+}	0.0830
	(0.106)	(0.139)	(0.103)	(0.101)	(0.130)	(0.0977)
Foreign Language	0.0628*	0.0659^{+}	−0.00194	0.0469^{+}	0.0114	−0.00405
	(0.0278)	(0.0340)	(0.0249)	(0.0266)	(0.0318)	(0.0236)
D-/F-Student	Omitted	Omitted	Omitted	Omitted	Omitted	Omitted
C-Student	0.143^{+}	−0.142	0.0946	0.163*	−0.136	0.116
	(0.0843)	(0.0952)	(0.100)	(0.0807)	(0.0886)	(0.0951)
B-Student	−0.0274	−0.131	−0.0280	0.0643	−0.0521	0.0714
	(0.0774)	(0.0902)	(0.0922)	(0.0744)	(0.0842)	(0.0877)
A-Student	−0.219**	−0.180^{+}	−0.0933	−0.0269	−0.0527	0.0902
	(0.0771)	(0.0945)	(0.0954)	(0.0749)	(0.0883)	(0.0915)
Constant	0.542*	1.151**	−0.00488	0.342	0.730^{+}	−0.0982
	(0.266)	(0.408)	(0.347)	(0.255)	(0.382)	(0.329)
Observations	3,271	2,166	1,854	3,271	2,166	1,854
Number of groups	129	129	129	129	129	129

Standard errors in parentheses. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

mediation effects appear in the results for computers in the home and for the language that parents speak at home.

Without controlling for insecurity, the largest student background effect on bullying for Whites is the mediation effect for the number of computers at home. The distinction is mainly between students who have at least one computer, compared to those who have none. Those with at least one computer are about .25 standard deviation more likely to self-identify as bully. Between 20 and 30 percent of this effect is mediated by insecurity. Among the other background factors, there are statistically significant mediation effects for parental education, dad in the home, books at home, and language parents speak at home. While the mediation percentages are relatively large, the absolute magnitudes for Whites are small: between 0.02 and 0.06 standard deviation.

Table 3. For Each Predictor, Insecurity Mediation Effects in Predicting Bullying Behavior, by Race/Ethnicity.

	White			Black			Latino		
VARIABLES	% Δ	Absolute Δ		% Δ	Absolute Δ		% Δ	Absolute Δ	
0–9 Books in the Home		Omitted			Omitted			Omitted	
10–24 Books in the Home	40%	0.03	*	54%	0.06	**	<20%	0.01	–
25–99 Books in the Home	30%	0.04	**	50%	0.11	**	28%	0.02	+
100–249 Books in the Home	51%	0.03	*	46%	0.08	**	29%	0.04	*
>250 Books in the Home	35%	0.01	–	54%	0.09	**	45%	0.06	**
No Computer		Omitted			Omitted			Omitted	
1 Computer	22%	0.06	**	35%	−0.04	+	41%	0.03	+
2 Computers	21%	0.06	**	30%	−0.06	**	<20%	–	–
3 or More Computers	26%	0.06	**	73%	−0.05	*	<20%	–	–
Dad at Home (Yes/No)	25%	0.03	**	21%	−0.02	–	<20%	0.01	–
Parent Less Than High Sch.		Omitted			Omitted			Omitted	
Parent High School	42%	0.03	–	31%	0.13	**	40%	0.04	*
Parent Associates Degree	69%	0.05	*	36%	0.15	**	30%	0.02	–
Parent 4 Year College	61%	0.06	*	34%	0.11	**	100%+	0.03	–
Parent Graduate Degree	70%	0.06	*	37%	0.12	**	31%	0.04	+
Foreign Language	25%	0.02	*	83%	0.04	**	<20%	–	–
D-/F-Student		Omitted			Omitted			Omitted	
C-Student	<20%	–	–	<20%	–	–	<20%	–	–
B-Student	100%+	0.09	**	60%	0.07	**	100%+	0.1	**
A-Student	88%	0.19	**	71%	0.11	**	100%+	0.18	**

Standard errors in parentheses. $^{**}p < 0.01$, $^{*}p < 0.05$, $^{+}p < 0.1$

Table 4. Racial/Ethnic Differences in How Strongly Background Predicts Bullying (Based on Coefficients in Table 1, above).

VARIABLES	White-Black	White-Latino	Black-Latino
Mediators			
Self-Esteem		Pos.**	Pos.*
Academic-status insecurity	Pos.**	Pos.**	
0–9 Books in the Home	Omitted	Omitted	Omitted
SES Background and GPA Variables			
10–24 Books in the Home			
25–99 Books in the Home			
100–249 Books in the Home			
>250 Books in the Home			Pos.*
No Computer	Omitted	Omitted	Omitted
1 Computer		Pos.*	
2 Computers		Pos.**	Pos.**
3 or More Computers		Pos.**	Pos.*
Dad at Home (Yes/No)			
Parent Less Than High Sch.	Omitted	Omitted	Omitted
Parent High School	Neg.*		Pos.**
Parent Associates Degree	Neg.*		Pos.**
Parent 4 Year College			Pos.*
Parent Graduate Degree			Pos.**
Foreign Language			
D-/F-Student	Omitted	Omitted	Omitted
C-Student	Neg.*		
B-Student			
A-Student			
Observations	3,271	2,166	1,854
Number of groups	129	129	129

$^{**}p < 0.01$, $^{*}p < 0.05$

In contrast to Blacks and Whites, there is very little mediation for Latinos. Other than for GPA and a very small effect for parents graduating from high school, the only statistically significant effect for Latinos applies to books at home. Without the insecurity mediators, having 100-to-250 instead of 10 or fewer books at home is associated with less bullying, while having over 250 instead

of 10 or fewer books at home is associated with more bullying. The latter finding aligns with the pattern in which the most advantaged Latino males more strongly identify as bully than the least advantaged. This pattern, however, should be interpreted cautiously. While the books-at-home mediation effects for Latinos are statistically significant, none of the books-at-home indicators in the equation to predict bullying has a coefficient distinguishable from zero.

Discussion

The paper sets out to investigate why students from low SES backgrounds and those with low GPAs agree more often than peers that 'Other students think I am a bully.' The core mediation hypothesis is that SES and GPA produce insecurities that, in turn, predict bullying. Findings here support this hypothesis. SES coefficients in equations predicting bullying drop by about one third, on average, when the insecurity indices are in the analysis, and insecurity mediates the entire estimated relationship between GPA and bullying.

The findings respond most directly to the work of Søndergaard (2012), whose qualitative analysis on adolescents' fear of being socially marginalized finds that students who perceive themselves at risk of being identified as low status, will bully peers in order to deflect potential contempt away from themselves and reduce their feelings of 'social exclusion anxiety.' Using a quantitative sample from 156 schools, this paper's analysis shows that SES and GPA factors that are likely causes of what Søndergaard calls 'contempt production,' do predict a measure of bullying. Here, a student's GPA is analogous to academic interests and studiousness in Søndergaard's work, and family SES variables are analogous to what she terms possessions. Both SES and GPA, in this paper, predict bullying.

However, the idea that the link of SES and GPA to bullying is mediated by academic-status insecurity, a concept derived from *performance avoidance* (Midgley et al., 2000; Midgley & Urban, 2001), goes beyond what Søndergaard explicitly considered. Students concerned about being perceived as less intelligent tend to behave in ways that provide excuses for their poor performances (Jackson, 2003). 'The struggle to escape looking stupid predisposes some students to engage in strategies … that will deflect attention away from their ability should poor performance occur' (Midgley & Urban, 2001, p. 61). The results of this study suggest that one way low-SES and low-achieving adolescents cope with their perceived stigma as 'dumb' is by bullying their peers. This way, they hope to deflect contempt production away from their own social vulnerability.

Limitations

While this paper is a contribution to the literature on adolescent bullying, limitations remain. First, the dependent variable is the respondent's perception that he is perceived to be a bully, and not an independent gauge of bullying behavior. To address this issue, the paper presents a confirmatory factor analysis that has bearing on the construct validity of this measure. This analysis is not definitive, since even the variables in the CFA are based on the student's perceptions. Second, a multi-item index for measuring bullying would be preferred, but was not available. Third, the statistical significance of mediation effects may be underestimated due to use of the normality theory approach for estimating their standard errors. And finally, the analyses are cross-sectional and not strong grounds for drawing causal inferences.

Implications

Findings in this paper suggest that students from lower SES backgrounds are more likely than their higher-SES peers to be targets for social contempt, and this presents school leaders with three problems to address, all related to school climate.

First, there is social learning of the meaning of SES and GPA, which spreads belief that lower SES and lower achieving peers are somehow inferior. School leaders might address this through programming focused on the arbitrary and unfair nature of stereotypes and stigmas. This could include discussing ways that negative assumptions about whole groups of people have been used to justify slavery and genocide and undermined both institutions and societies historically.

Second, leaders can confront social norms that condone the translation of stereotypes and stigmas into publicly expressed contempt. Effective programming to increase empathy, such as the highly successful Roots of Empathy intervention (Santos, Chartier, Whalen, Chateau, & Boyd, 2011), or training that teaches students how to safely show disapproval for expressions of contempt could be important.

Third, leaders can support programming to help potential targets of contempt cope more constructively with threats of social marginalization. For example, such students can be taught to assert themselves in positive and prosocial ways, or to adopt a growth mindset about their own intelligence. There can be school-level reforms to cultivate growth mindsets, for example, by celebrating academic progress and not just achievement levels (Yeager & Dweck, 2012). Low-achievers with growth mindsets can focus more on improvement rather than hiding effort (Ferguson, 2016) or bulling peers, and higher achievers can learn to be supportive rather than contemptuous of classmates who struggle.

Finally, in many schools, students who struggle receive the lowest-quality teaching, which solidifies their position at the bottom of the academic hierarchy (Gamoran, 2009). Findings that low achievement predicts bullying, provide yet another reason to focus on improving the quality of instruction provided to struggling learners.

Disclosure statement

Ronald F. Ferguson, co-author of this study, is co-founder of Tripod Education Partners, Inc., which collected and provided the data for this study.

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Appendix A. Validity Analysis

First, using confirmatory factor analysis, we test three alternative models. Each model assigns '*Other students think I am a bully*' to one of three indices: intimidation, academic-status insecurity, or self-esteem. The academic-status insecurity and self-esteem indices were the same as in the body of the paper. The intimidation index comprises the following two items: '*The way I dress and act makes adults feel uncomfortable*,' and '*Some teachers seem afraid of me*.' Validity of the bullying measure is supported by the fact that CFA fit statistics are acceptable only when '*Other students think I am a bully*' is grouped with the intimidation index, as shown in Figure 2: χ_M^2 = 4610.954, RMSEA = .071, TLI = .904, SRMR = .051 (see Hu & Bentler, 1999).

Second, we examine whether the aggregated within-school, grade-level mean of our dependent variable correlates with a parallel measure of victimization, '*I get bullied at school*.' Figure 3 shows the scatter plot and best-fit line. Confirming expectations, a higher percentage of students agree that '*Other students think I am a bully*,' where a higher percentage of peers report '*I get bullied at school*.'

Hence, both analyses support the construct validity of '*Other students think I am a bully*,' as a measure of bullying behavior.

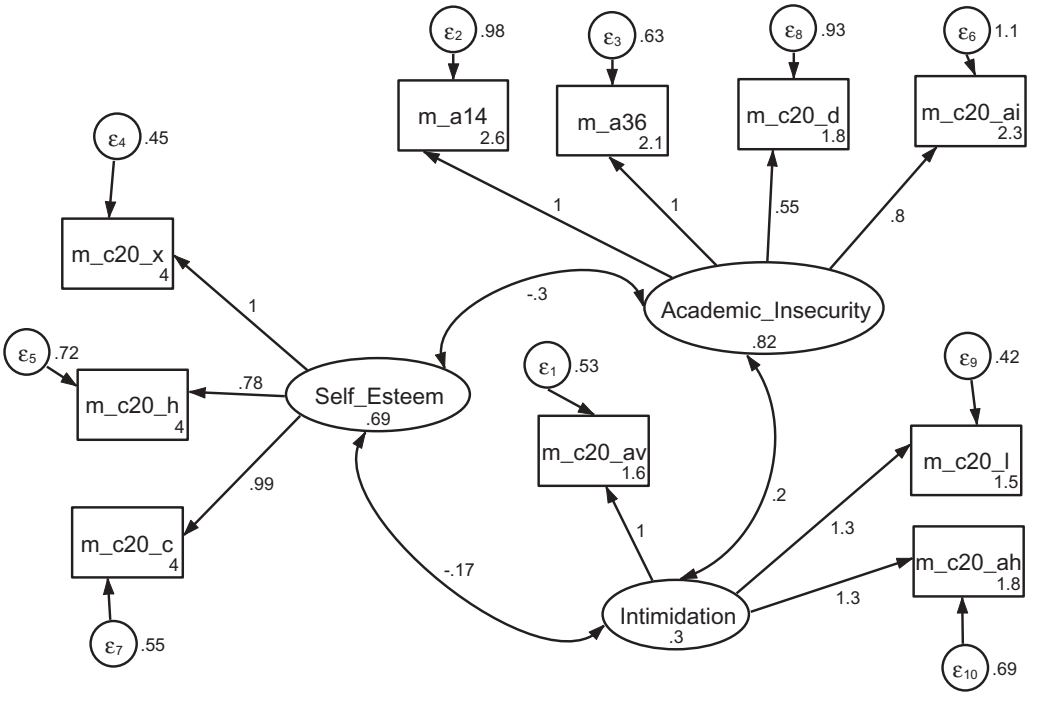

Figure 2. Bullying Loading on Intimidation: N = 7,291 students. χ_M^2 = 4610.954, RMSEA = .071, CFI = .932, TLI = .904, SRMR = .051.

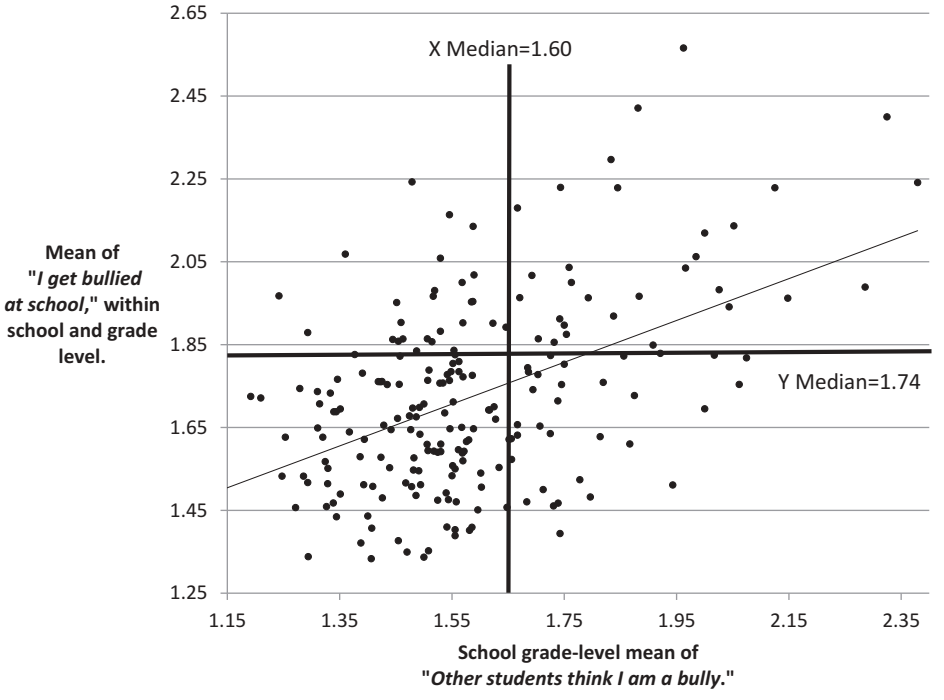

Figure 3. Mean agreement with 'Other students think I am a bully', predicts student victimization within school-grade-level units. N = 207 school-grade-level units with 50 or more students.